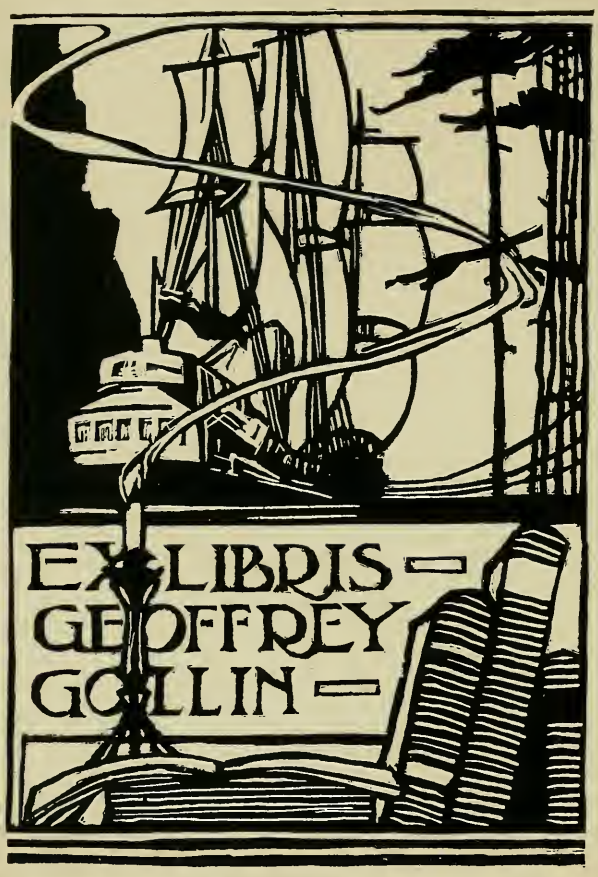
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A CRITICAL
EXAMINATION
OF THE
PAINTINGS
On the CIELING of the
Banqueting-houſe at *Whitehall.*

A CRITICAL EXAMINATION OF THE PAINTINGS

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EXAMINATION

OF THOSE

TWO PAINTINGS

On the CIELING of the

Banqueting-houſe at *Whitehall*:

IN WHICH

ARCHITECTURE is introduced, ſo far as relates to the PERSPECTIVE;

TOGETHER WITH

The DISCUSSION of a QUESTION, which has been the Subject of Debate among PAINTERS.

Written many Years ſince;

But now firſt PUBLISHED.

By *J. HIGHMORE.*

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EXAMINATION

TWO PAINTINGS

PREFACE.

THE following Piece has lain by me, finiſhed, many Years, as well as a larger Work on the general Subject of Perſpective; both which I have, at ſeveral times, intended to publiſh, either ſeparately, or together; and, in the latter View, had deſigned this as an Appendix: But it appearing, ſome time ſince, by ſeveral Advertiſements, that Mr. *Kirby*, of *Ipſwich*, was then printing a Treatiſe on this Subject, I delayed mine till I ſhould ſee whether his Performance, in the Principles and Inſtructions, was juſt and complete, ſo as to anſwer all the Purpoſes of what I had written; reſolving, in that Caſe, intirely to ſuppreſs my own.

This, which I now offer to the Public, is only that ſmall Part which was deſigned as an Appendix to the larger Work; and contains an Examination of the Cieling in the Banqueting-houſe, together with the Conſideration, and Solution, of a Queſtion which hath occaſioned frequent Diſputes among modern Artiſts; *viz.* Whether a Range of Columns, ſtanding on a Line parallel to the Picture, ought to be painted according to the ſtrict Rules of Perſpective; that is, whether thoſe Columns, in proportion as they

recede from the Centre of the Picture, ſhould be drawn broader than *that* directly oppoſite to the Eye, as the Rules require; or whether (becauſe they really, *in Nature*, appear leſs, in proportion as they are more diſtant) they ought not to be made leſs, or, at moſt, equal to each other, in the Picture?

This Point I had determined, as is above remarked, many Years ſince, and now give it in the manner I then wrote it, without any Alteration, on account of the preſent Occaſion; and the rather, as I find that Mr. *Kirby* (who has undertaken the ſame Queſtion) avows thoſe very Notions which I therein ſuggeſted to be the moſt probable Grounds of the Miſtakes of ſeveral Authors and Painters: For he ſays, *p.* 70. of his Firſt Part, "Since the Fallacies of Viſion "are ſo many and great, *&c.*---it ſeems reaſonable not to comply "with the ſtrict Rules of mathematical Perſpective, in ſome parti- "cular Caſes (as in this before us), but to draw the Repreſenta- "tions of Objects *as they appear to the Eye*, &c." But I would ask, how? by Gueſs? or by ſome Rule? and if by any, by what Rule are they to be drawn, contrary to, or different from, the ſtrict mathematical Perſpective Rules?---Beſides, he owns, *p.* 72. "That "what he had ſaid, related only to round or cylindrical Objects; "but that, as to ſquare, they *ſhould* continually grow larger, the "more they are removed from the Centre of the Picture, *&c.*"; and adds, "that the Diagonal of a Square is longer than its Side; "but the Diameter, which is the Meaſure, of a Circle, is always of "the ſame Length." This is true; and is the Reaſon why the *Plinth* of a Baſe appears wider than the *Torus*, when ſeen obliquely, though but equal in Breadth, when ſeen directly; and this will be ſtill true, though the Columns are made as much wider as true Perſpective requires; and therefore can be nothing to the Purpoſe;

Purpose; for if (according to him) the Squares of the Plinths at the Base of the Columns, as well as the Pedestals, are made continually wider, while the Columns are preserved all of the same Breadth, what will be the Representation of the round Part of the Bases, and of the Columns within those Squares? and how strangely will the Angles of the Plinths, and the Pedestals, shoot out beyond the Breadths of those Columns, and discover a Disproportion not to be prevented by any Expedient?

When I wrote this last Paragraph, I had no Suspicion, that he would have proposed any thing like a Rule founded on such mistaken Notions; and therefore was the more surprised to find what he offers in *p.* 55. of his Second Part. His Words are;

"First, Find the Representation of that Column which is "neareſt the Centre of the Picture--then set off the Distance for "the Centres of the other Columns, and draw the Squares for "the Plinth, Capital, *&c.*; and then, upon each Side of the Axis, "set off at the Bottom of each Column Half the Diameter of the "Corner Column *(that is, of the First, or neareſt to the Centre "of the Picture)*; and, at the Top of the Column, set off Half "the Width of the Neck of the Corner Column: Finally, draw "Lines from thence so as to diminish the Column in a proper "manner; and thereby we may make all the Columns that are parallel to the Eye, *of the same Bigneſs*. As to the great Projection "of their Bases, they will not look at all prepoſterous, if they "are done by any one who has but a tolerable Eye for Drawing, "and is careful in taking a proper Distance for the Eye."

Now, beſides that every Column, except the neareſt to the Centre, will be falſe, his Rule appears inconſiſtent with itſelf, and with his own Intention; for either the whole Building may be conſiderably removed from the Centre of the Picture, or Part of it may cover that Centre: In the former Caſe, that which is neareſt to it may be ſo diſtant as to become much wider than he muſt allow, on his Principles; and, in the latter Caſe (how long ſoever the Range of Columns may be), the moſt diſtant will be no wider than the mere geometrical Breadth; becauſe *that* which covers the Centre of the Picture will be the Meaſure of all the reſt. Hence it follows, that if he was to repreſent a Building, one Column of which ſhould cover the Centre of the Picture, and the reſt be continued to the Extremity of the ſame Picture, every Column would be of the geometrical Breadth, and no more: Whereas, had the ſame Building begun at a Diſtance from the Centre of the Picture, the Firſt Column would (according to his own Rule) be much wider than one ſtanding in the ſame Place, if the Building had begun at the Centre. Such Incongruities will be unavoidable in deviating from the true Rules of Perſpective.---He ſays, "If they are done by a Perſon having a tole-"rable Eye for Drawing, they will not look prepoſterous;"---but, in truth, Skill in Drawing has nothing to do in this Caſe, where Meaſures are concerned; the moſt skilful and the moſt ignorant, in Drawing, are equally directed, by him, to make the Plinths, Pedeſtals, *&c.* progreſſively wider, *according to true Perſpective*; and the Columns on thoſe Plinths all equal, *contrary to the Rules*. How can an *Eye for Drawing*, or any Ability whatſoever, reconcile theſe Diſproportions?

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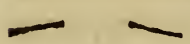
As to what he says, at last, of a proper Distance, I agree *that* will prevent all Inconveniencies; but no Distance will reduce them to equal Breadths.

He surely forgets what his Author, *Brook Taylor*, says in the Preface of his Book, *p.* 11, and 12.

" The executive Part of Painting is wholly confined, and strictly " tied to the Rules of Art, which cannot be dispensed with *upon* " *any account*; and therefore, in this, the Artist ought to govern " himself *intirely* by the Rules of Art, *not to take any Liberties* " *whatsoever*. For any thing that is not truly drawn according " to the Rules of Perspective, or not truly coloured, or truly " shaded, does not appear to be what the Artist intended, but " something else. Wherefore, if, at any time, the Artist hap- " pens to imagine, that his Picture would look better, if he " should swerve a little from these Rules, he may assure himself, " that the Fault belongs to his original Design, and not to the " Strictness of the Rules; for what is perfectly agreeable and just " in the real original Objects themselves, can never appear de- " fective in a Picture, where those Objects are exactly copied." And the First Section of both his Editions is as strong, and precise, and particular, as possible, to the same Purpose. It is therefore very extraordinary, that Mr. K. should depart from the Principles of his Author, whom he professes to follow and explain, especially in a Matter wherein this Author hath taken care, at the very Entrance of his Work, to precaution his Reader in so explicit a manner. Not that the Authority of *Brook Taylor*, or of any Man, ought to be decisive, if it can be shewn that he was mistaken; but if he was not, it must be confessed, that his Explainer is, and (though

undeſignedly) miſleads thoſe whom he undertakes to inſtruct. His Reaſoning appears altogether groundleſs, and as inconſiſtent with the general Principles of Perſpective, as with the Syſtem of his Author; and affects many other Caſes, beſides that which is the immediate Occaſion of it.

As for Inſtance; The Repreſentation of a long Wall *on a Picture parallel to it*, ſhould be made of the ſame Height at its utmoſt Extent, as directly oppoſite to the Eye, notwithſtanding it appears of leſs Height, the farther it is extended; for the Repreſentation will appear as much leſs, in proportion, at the Extent, as the Original appears; they being both ſeen under the ſame Angles, and in, exactly, the ſame oblique Direction.

Yet there are many Examples of Errors of this Kind, in the Works of celebrated Artiſts, who have otherwiſe great Merit; particularly in ſeveral Prints of Views [by *Rigaud*]; and, among others, in a View of *Greenwich* Hoſpital (the Spectator being ſuppoſed on the River oppoſite to the middle Space between the Two Fronts) he has drawn the upper Lines of the Cornices, inclining towards the Ground, at the Extremities, thus  : So that if theſe Lines were continued, inwards, till they ſhould meet in the Middle, between the Fronts, they would make an obtuſe Angle, inſtead of one right Line.

To theſe may be added another Example, which, being very ſimple, will be intelligible to every Reader. In the Repreſentation of a ſquare Pavement, if a very ſmall Diſtance be taken, the forwardeſt Squares will be deeper than wide; which, though they may appear odd, when ſeen at a greater Diſtance than that taken,

are

are nevertheleſs ſtrictly true, and ought to be ſo repreſented, when the Place or Station of the Spectator is limited, as may, in certain Caſes, happen; and then, inſtead of calling the Repreſentation a *Foreſhortening*, the Term need only be changed to that of *Forelengthening*; which, in ſuch Inſtances, will be as juſt Perſpective as any whatever; and this is hinted at *Fig.* 1. in the Beginning of the following Diſcourſe: But when the Painter is at Liberty to chooſe his Diſtance, as on a Picture with reſpect to which the Spectator is not confined, it will, no doubt, be more eligible to take a Station from whence his Objects will appear more nearly of their original Proportion; but, in all Caſes, the ſtrict Rules will never ſubject him to any Inconveniencies, much leſs to any Abſurdities.

Notwithſtanding the Freedom of my Remarks in reſpect to the Paſſages to which I have referred, if my Leiſure had permitted me to read and examine the whole Book, I doubt not but I ſhould have found much to commend, and very little to cenſure; and, as far as I can judge by a curſory View of the greateſt Part, believe it to be an ingenious and uſeful Performance, although the Author may have entertained a few miſtaken Notions, in common with ſome of the greateſt Maſters, whoſe general Excellencies ſufficiently atone for them.

I have carefully endeavoured to avoid any Expreſſions that might give Pain to the Author on whom I animadvert; that being the fartheſt from my Intention; and I ſhould be very ſorry, if the Terms I have uſed, for the ſake of Truth and Perſpicuity, ſhould produce any other Effect than what I deſign.

Juſtice

Juſtice and Candor oblige me to obſerve, that he expreſſes himſelf with great Modeſty; and, for that very Reaſon, he may retract with the better Grace, when convinced of his Miſtake, as I doubt not he will be, on reconſidering the Point in Queſtion; and as every Man is liable to Error, ſo he only deſerves Reproach who perſiſts in it after Conviction. And if it can be ſhewn, that the Miſtake is on my Side, I am ready to acknowlege it as frankly as I have remarked (what I preſume to be) that of another.

I ſhall make no other Apology for the Length of the Preface to ſo ſhort a Work, but that the immediate Occaſion of publiſhing it required ſeveral Quotations, and Reaſonings upon them.

A

CRITICAL EXAMINATION, &c.

NO Painting can appear perfectly true, unleſs ſeen from the Point intended by the Painter; becauſe the Picture, being always conſidered as a tranſparent Surface, or Medium, through which the viſual Rays are ſuppoſed to paſs, if the Spectator changes his Situation, thoſe Rays *(in Nature)* will interſect that Surface in different Points; and therefore *(in the Picture)*, being determined to ſuch certain Points, the Station of the Spectator becomes neceſſarily fixed, and unalterable, and the Picture muſt appear falſe ſeen otherwiſe; which may be illuſtrated as follows.

Suppoſe an original, that is a real, Cube placed directly oppoſite to the Spectator's Eye, and ſomewhat below it: in this Situation, he will ſee only Two Faces of it, one in Front, the other at the Top; which latter will be foreſhortened; and, if he moves to the Right or Left, he will ſee a Third Face alſo foreſhortened; but

if, inſtead of an original Cube, this Firſt Appearance was a Picture repreſenting a Cube in ſuch Situation, the Spectator would never ſee more or leſs by changing his Place; nor ever ſee it *truly* but from one certain Point: There, indeed, it might exactly repreſent the Original, and deceive. Hence it is evident, that tho' a Picture may be perfectly true from one certain Point of View, it cannot from any other; becauſe the Spectator would ſtill have the ſame Appearance, though he expected a different; which is mentioned, to ſhew the Neceſſity of regarding a Picture as intended by the Painter; and alſo to ſhew the Miſtake of thoſe, who imagine that it is often adviſeable to deviate from the Strictneſs of the Rules, leſt, in ſome Caſes, Things ſhould appear diſagreeable; which, however, no Picture will, that is true, and truly ſeen; but, if made falſe, for this Reaſon, muſt appear falſe every-where, being really true no-where. Some particular Caſes, however, have been thought to require this Liberty; ſuch as, for Inſtance, a long Gallery, through which the Spectator is ſuppoſed to walk: If this were painted, to be viewed from a given Point, though with the utmoſt Truth, as the Spectator moves on, it would appear falſe, it is allowed; but this is unavoidable in the Nature of Things; and the ſame would happen, if any other Point had been choſen, when not ſeen from ſuch Point. The Queſtion is, Whether it ſhould be painted true from ſome one Point, or falſe from all? If the Painting muſt be one continued Picture, and could be all ſeen at a View, there would

would be no room to doubt, but that it ought to be painted truly from one Point: But if it were allowed to divide the Gallery into ſeveral diſtinct Pictures, in that Caſe, each Picture might have its proper Point of Sight, and every one be viewed ſeparately; which, perhaps, is to be preferred.

And thus much is ſaid, to obviate any Objections which might poſſibly be ſtarted againſt the Manner of treating the Subject of the following Pages; and to ſhew, that how plauſible ſoever theſe Conſiderations may be thought in ſome ſuch Caſes as that juſt mentioned, yet they can have no Place here---this Cieling being actually divided into Nine ſeparate Pictures, evidently intended to be viewed ſingly, and having each its own proper Point of Sight, from which only it can be truly ſeen; and therefore ought to be ſtrictly true from thence, eſpecially if the Painter really deſigned this, as, it is preſumed, will appear by what ſhall be offered.

THESE Paintings are plainly designed to represent Pieces of Architecture standing perpendicularly on an horizontal Plane, and seen from given Points below; for the Plane is in reality horizontal, and therefore ought to be so considered; and the Foreshortening of the Columns in the Pictures, as they are there painted, cannot be true on any other Supposition, besides that the human Figures are all proportionably foreshortened; but if they were intended as Pictures on perpendicular, or vertical Planes (in which manner several great Masters have formerly painted on Cielings), then all perpendicular Objects ought to lose no more of their geometrical Heights, than of their geometrical Breadths, and the forwardest Objects would be equal to their Originals in both; which is not the Case here; for the Columns, *&c.* are not quite One-third of their geometrical Heights; by which it is evident, that the Intention was to represent them as is here supposed. This Circumstance also determines the very Point from whence the Picture ought to be viewed; which having found, a judicious Spectator will be enabled to examine the Whole.

Fig. 1.] Let C H be the Section or Profile of the Cieling, A C a Column, or any original perpendicular Object, of its geometrical Height; C *a*, being One-third of the Length of C A, is taken to represent it; *a* being the

the Repreſentation of A, then, I ſay, the Spectator's Eye muſt be ſomewhere in the Line A D; and if D is ſuppoſed to be the Height of the Eye from the Floor, then D is that Point; for, ſuppoſing D E to repreſent a Line, in which the Spectator's Eye might move backwards or forwards, it is evident, if C A be repreſented within the Space C *a*, that D muſt be the Place where the Spectator ought to ſtop. Otherwiſe imagine the Eye to be removed back as far as E; ſo that the viſual Ray A E may cut the Cieling in an Angle of 45 Degrees; then the painted Object will be equal in Length to its Original (though on ~~the~~ an horizontal Plane), and in all Places of D E backwarder than E; *i. e.* 45 Degrees; the Repreſentation of A C will be longer than its Original, as, in all Places forwarder than E, the Repreſentation will be ſhorter than its Original. It is of no Conſequence whether the Floor be the true Diſtance, or whether that were taken away, and the Picture ſeen from the Ground: In both Caſes, the Eye muſt be in ſome Point of the indefinite Line A D; and ſo will ſee *a* as the Repreſentation of A; for if the Eye were at *b*, that would make no Alteration in the Perſpective Length of C *a*; as is evident.

Fig. 2.] And now, having found the Point D, or the Spectator's Eye, it will be neceſſary, in order to examine the Picture, to ſuppoſe the Cieling ſeen not ſidewiſe, as in the Scheme above, but in Front, over the Spectator's Head; and, in this View, let C, S, C, be taken for the Plane of the Cieling; and, from S, let S, D, be drawn

drawn perpendicular to that Plane below it, and C A, C A, be drawn, of equal Lengths, perpendicular to the ſame Plane, above it. Now, ſuppoſe D, S, the Diſtance of the Eye from the ſaid Plane, or Picture, of which S will conſequently be the Centre, and the Lines S D and C A, C A, will be all parallel to one another *(by* 6. *of the* 11. *Euclid)*; then will the Eye ſee C A, C A, upon the Picture, in the Lines C S, C S, where C *a*, C *a*, will will be the Repreſentations of C A, C A; for A D and A D, in this Scheme, are viſual Rays, as A D in the former.

But as one principal Error in theſe Paintings, is the falſe Direction of the Columns (for they are drawn parallel to the Sides of the Picture, and to each other, inſtead of tending both to the ſame Point), it may be proper to conſider this Circumſtance more particularly. A C, and A C, being thus raiſed perpendicularly, are in the Poſition of the original Columns; and D S is drawn parallel to them, cutting the Cieling, or Picture, in S, directly over the Spectator's Head. Now, ſuppoſing the Cieling, or Picture, tranſparent, it is impoſſible the Spectator, in this Situation, ſhould ſee the Tops or Capitals of the Columns in any other Lines or Directions than thoſe of C S, and C S; for each Triangle, C A D, is a Plane cutting the Cieling, or Picture, in that Line C S; the Point C touching it, and the viſual Ray D A cutting it in *a*; and if the Columns were ever ſo high, even infinitely continued, upwards, their whole

Repre-

Repreſentations would be in the Lines C S, and C S, and their Tops, at an infinite Diſtance, would coincide with S.

Or thus: The Lines C A, and D S, being parallel to each other, a Plane will paſs through them both; and as C A touches the Picture in C, and D S touches it in S, the Plane paſſing through theſe Lines will neceſſarily cut the Picture in C and S; that is, in the Line C, S; and the Line A D is, in this Plane, A C, S D, and (with it) cuts the Picture in the Line C S, their common Interſection; *i. e.* at the Point *a*.

Though nothing more is abſolutely neceſſary to the preſent Purpoſe, yet the following Demonſtration may be acceptable to ſome Readers.

The Two Triangles C A D, C A D, are equal, being on equal Baſes, and between the ſame Parallels [See *Prop.* 38. of the Firſt Book of *Euclid*]; and C S D, C S D, are equal, becauſe on the ſame Baſe, and between the ſame Parallels *(Prop.* 37.): Wherefore the whole Figures C A *a* S D, C A *a* S D, are equal, (each being compoſed of Two Triangles, already proved to be reſpectively equal); and therefore, laſtly, taking away the Two equal Triangles C S D, C S D, the remaining Triangles C A *a*, C A *a*, muſt be equal; and conſequently, having equal Baſes on the ſame Line, muſt be between the ſame Parallels: For which Reaſon, C *a*, C *a*, are of equal Height;

Height; *i. e.* a Line drawn from *a* to *a* will be parallel to one drawn from C to C; and would be ſo, tho' the Obliquity, and conſequently the Lengths, of C *a*, and C *a*, were different, as they muſt be, when S is not exactly in the middle.

All Repreſentations of Objects, parallel to the Picture, are parallel to their Originals, and conſequently retain their geometrical Forms: As for Inſtance; Circles will always be Circles in their Repreſentations, and Squares will be Squares. Let B *(Fig.* 3.) be an original Square, with a Circle inſcribed, and let *e*, *f*, D, *d*, be a Picture parallel to it; D being the Diſtance, or Place of the Eye, in this Caſe the Perſpective Repreſentation made by the viſual Rays, interſecting the Picture, will be a Square, and the Circle, within, will alſo be a Circle; nor will theſe Forms be changed, if the Eye were removed to *d*, or to any other Point, while the Picture, which is here always ſuppoſed parallel, receives the Image by means of the viſual Rays interſecting it from the Original; for each Line of the Perſpective, or Picture, is neceſſarily parallel and ſimilar to its Correſpondent in the Original; being formed by a triangular Plane paſſing thro' the Plane of the Picture; the Baſe of which Triangle is the original Line, and the Vertex of it is the Eye: Or thus; The ſmaller Triangles, D, 1, 2, D, 1, 2, are ſimilar to the larger Triangles D, 3, 4, D, 3, 4; D 1 being to D 3, as D 2, is to D 4, and as 1, 2 is to 3, 4; for D, 3, 4, is a triangular Plane cutting the Picture in 1, 2; which

which Picture is parallel to the original Square [See 16, and 17 *Prop.* of the 11th Book of *Euclid*'s *Elements*]; and ſo of every other Line compoſing the whole Square, and of the whole Circle.

From what has been ſaid above, it is evident, that a Picture on a Cieling, repreſenting ſuch Pieces of Architecture, as thoſe which have occaſioned theſe Reflections, ought to appear as K (*Fig.* 4.); whereas they are painted as L (*Fig.* 5.); which does not repreſent the Thing intended, but ſomething elſe; for if, in K, the Columns repreſent Perpendiculars to the horizontal Plane (the Originals of which are conſequently parallel to each other), then, in L, they repreſent Columns diverging from each other at the Top, thus \ /: Moreover, the Plinths of the Baſes not being Squares, but Trapeziums, and the Circles not being Circles, but Ellipſes, do repreſent Trapeziums and Ellipſes; for, ſince they are on a Picture parallel to the Originals, they muſt repreſent Figures ſimilar, or of the ſame Forms.

It remains only to point out the probable Cauſes of the Errors here remarked; in order to which it muſt be conſidered, as hath been obſerved, that, when the Picture is a Plane parallel to the original Objects, it will receive their Repreſentations in a parallel Manner; that is, the ſeveral Parts will be in the ſame Proportion to each other as in the Originals: For Inſtance; they will neither be ſhortened nor lengthened, but always keep

their geometrical Proportions in what manner ſoever the Spectator's Eye is placed; but when the Picture makes a right (or any other) Angle with the Original, it will receive their Repreſentations either longer or ſhorter than ſuch Originals, according to the Situation of the Spectator's Eye; as hath been ſhewn at *Fig.* 1.

Now, the apparent Cauſe of theſe Miſtakes is a general Notion, that all Objects ought to be repreſented as they appear to the Eye; which, though in a certain Senſe true, is far from being ſo, as frequently applied to Practice; that is, without conſidering the Poſition of the Picture, or Medium through which theſe Objects do appear to the Eye, whether parallel, perpendicular, or inclined, with reſpect to the original Objects; the Underſtanding of which thoroughly, would prevent all poſſible Errors, as the neglecting, or not underſtanding this, has occaſioned theſe, and many more.

In the Caſe before us, the Painter muſt have conſidered, that, if he had ſeen Columns in the Situation in which he has ſuppoſed the Originals of theſe, from the Station which he has choſen, they would appear ſhortened: And herein he judged rightly; and hath given them a Length ſuitable to the Plane on which, or Medium through which, they are ſeen from below; but then he has made the Columns parallel to each other; which they never can be on an horizontal Plane. From hence it appears, that his Miſtake is owing to what has been already taken Notice of; *viz.* not conſidering the

Neceſſity

Neceſſity of finding the Points of Interſection of all the Parts of the Objects, on the ſame Medium, from one and the ſame Station.

Again, The Circles and Squares are falſe, for the ſame Reaſon; for though it be true, that a Square or Circle, ſeen obliquely, will not appear as when ſeen directly, yet it does not follow (as hath been remarked), that they muſt not be repreſented by Squares and Circles; on the contrary, they are to be repreſented by ſimilar Figures; for the Obliquity of the Spectator's Situation, in reſpect of the Painting, being exactly the ſame as in reſpect of the Original, will produce the ſame Effect; *i. e.* in both Caſes, the Image in his Eye will be the ſame: So that, tho' it be not true, that all Objects are to be repreſented, in all Caſes, as they appear (without regard to the Medium through which they are ſeen); yet it is true, that all Objects are to be painted ſo, on the Medium through which they are ſeen, or ſuppoſed to be ſeen, as that they ſhall appear, as the Originals appear.

For want of theſe Conſiderations, or want of ſufficient Knowlege, the Painter hath repreſented the Objects here, in ſome Circumſtances, as on an horizontal Plane; in others, as if on a perpendicular Plane; in ſuch manner that the Pictures are falſe on any Plane whatſoever; and eminently ſo on the Plane where they are.

Tho' it is preſumed, that what has been undertaken is ſufficiently proved; yet ſince it might be expected, that thoſe Pieces of Architecture, which are condemned, ſhould be exhibited as, it is pretended, they ought to have been painted; to ſatisfy ſuch Curioſity, they are added, both as repreſented on the Cieling, and alſo as they ought to have been repreſented: But, in the Firſt, marked O, O, the Wreathing of the Columns is omitted, to ſhew the Perſpective more nakedly; and, as they are mere Sketches, Regard is had only to the Perſpective.

The Squares of the Baſes of the Pedeſtals, in the Firſt, are left viſible, to ſhew the Effect, and convince the Reader of their Truth; tho' otherwiſe they ought to be ſupported, appearing here in the Air.

In the Second, marked P, P, the Columns are ſuppoſed cut aſunder, for the ſame Reaſon; that is, to ſhew the Circles.

The Reader will judge better of the Effect, by holding the Prints over his Head, for a few Moments.

And tho', in this ſmall Treatiſe, the Principles, in general, were only intended to be aſcertained, and not the Practice; which latter is amply and explicitly taught in a larger Work; yet, that the Second Figure may be more readily underſtood, and the Operation comprehended, let it be obſerved, that the Line, marked

1, 2, 3, 4, 5, 6, is the Axis of a Cylinder, and the numerical Figures are Centres of the ſeveral Circles; each of which is a Plane parallel to the Picture: For Inſtance, N° I. is the Centre of the Circles *a* and *b*; which are conſidered as concentrical; 2 is the Centre of *c*,- - 3 is the Centre of *d*,---4 is the Centre of *e* and *f*; which are concentrical;---5 is the Centre of *g*;---and 6 is the Centre of *h* and *i*; which Circles are alſo concentrical.

The ſame Principles, and the ſame Kind of Reaſoning, will determine the Queſtion, Whether, in repreſenting a Row of Columns, ſtanding on a Line parallel to the Picture, thoſe which are more diſtant from the Centre of ſuch Picture, ſhould be made equal to, leſs or bigger than, the nearer? It is allowed they appear leſs; but the Anſwer to this Queſtion is, that they ought to be made bigger; and, though ſo painted, they will really appear as much leſs as they appear in Nature: For (*Fig.* 6.) let A, B, and C, be Three Columns, either ſquare or round; and firſt ſuppoſe them ſquare; it is evident, that the Repreſentation of them will take up the Space marked by the viſual Rays, from the extreme Angles to D, the Spectator's Eye, on the Line E F, which may be conſidered as the parallel Picture; that is, the Repreſentation of A will fill the Space *g*, *h*; that of B will fill the Space *i*, *k*; and that of C, the Space *l*, *m*.

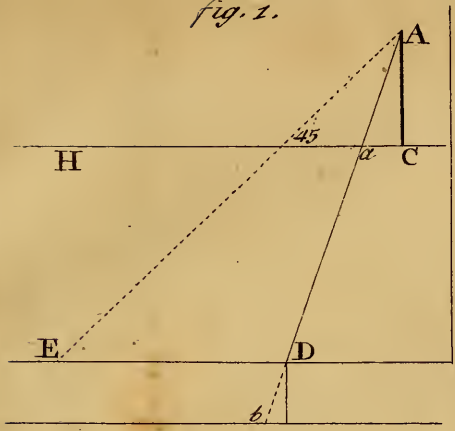
If the Columns are round, the ſeveral Spaces, which their Repreſentations employ, will be determined by the Rays which are Tangents to the Circles: Theſe Spaces are marked with a double, or blacker Line: But if the Picture be placed on the Line E, H, or any other Line between H and D (the End E remaining unmoved), the Repreſentations of the more diſtant Columns will then be in leſs Spaces of the Picture, in certain Proportions, according to their ſeveral Diſtances: But, on all theſe Pictures, they will be truly repreſented, and will exhibit the Images of the Originals to the Eye of the Spectator at D; who will neceſſarily form the ſame Ideas of the Proportions and Diſtances of the Objects from any one of theſe Pictures, as from any other of them; which may all be conſidered as tranſparent Planes, or as one ſuch Plane moveable on a Hinge, at E, from F to H, or to any other Point on the Arc F H; which Plane or Planes (being ſuppoſed tranſparent) no more hinder the Spectator from diſcerning the original Objects than the common Medium of Air; and as all the viſual Rays are neceſſarily right Lines, the Picture, or Medium, makes no Alteration in their Directions; which are continued, without Interruption, from the ſeveral Parts of the Originals, to D, through one or more tranſparent Planes, however placed; and, whichſoever be choſen, the Repreſentations can be determined by nothing but the Interſections of thoſe viſual Rays, and cannot poſſibly be falſe, if theſe Interſections are truly found. And ſince every Reader, even the leaſt intelligent, will readily allow, that the Repreſentations

ations on the Picture E, H, muſt truly exhibit the Images of their Originals; a little Attention, and Reflection, will alſo convince him, that thoſe on the Picture E, F, muſt neceſſarily exhibit them with equal Truth, becauſe they are determined by the very ſame Rays. But as ſomething of this Kind has been already ſaid, in the Examination of the Banqueting-houſe, no more need be here added.

N. B. The Rays for the round Columns are determined by making Tangents to the ſeveral Circles from D, and the Points in which they touch are found, by biſecting the Line from D to the Centre of each Circle; that is to ſay, the Lines D A, D B, and D C, and with the Lengths *a* A, *b* B, and *c* C, as Radii, making an Arc through the Centre of each Circle, cutting the Circumference in the Points ſought.

If the Circles were nearer each other, and D at a greater Diſtance, the Difference would be proportionally leſs, and, at a ſufficient Diſtance, not at all offenſive; as indeed nothing, that is truly repreſented, can be; but even at this, or any Diſtance, the Rule (being demonſtrably and univerſally juſt) cannot vary.

F I N I S.



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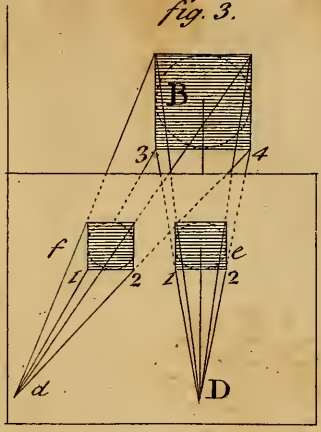

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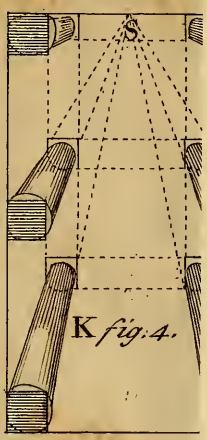

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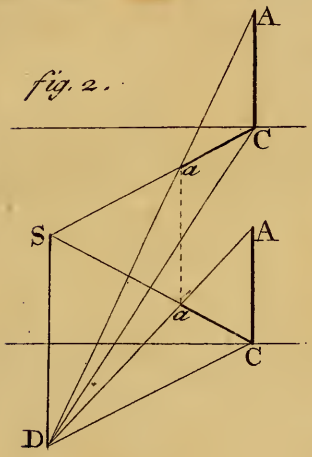

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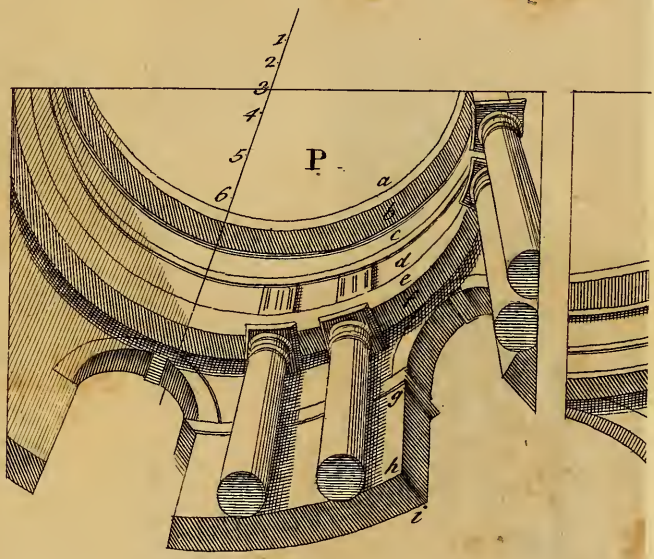

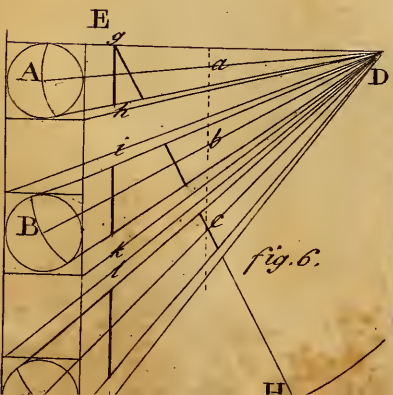

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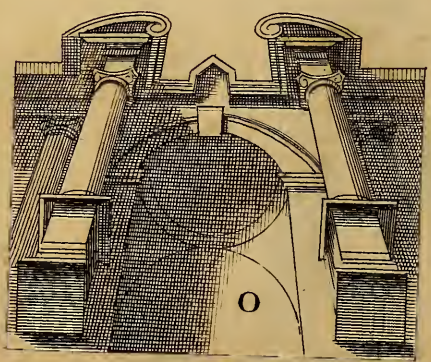

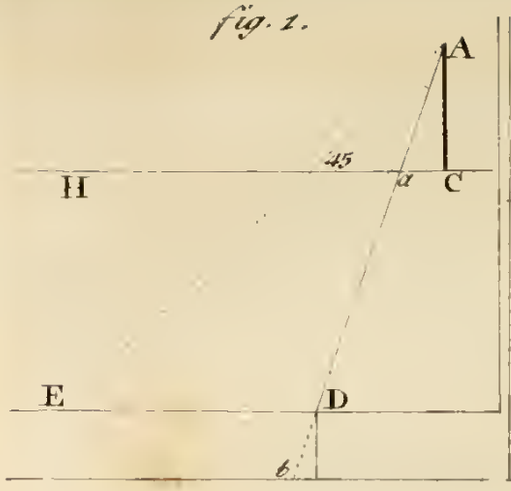

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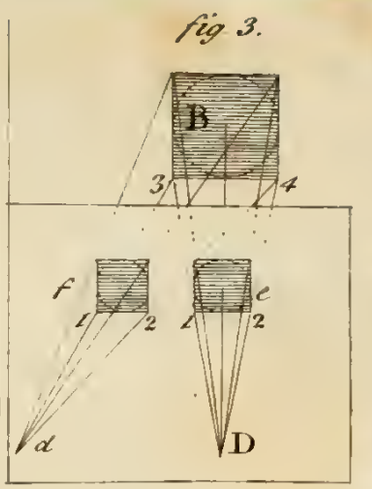

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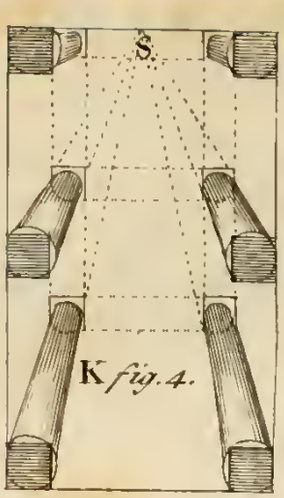

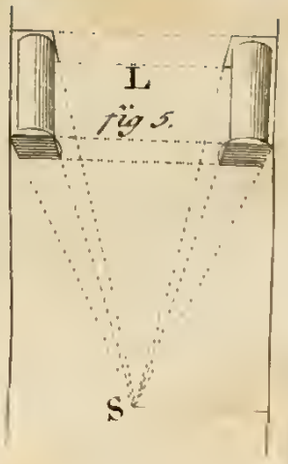

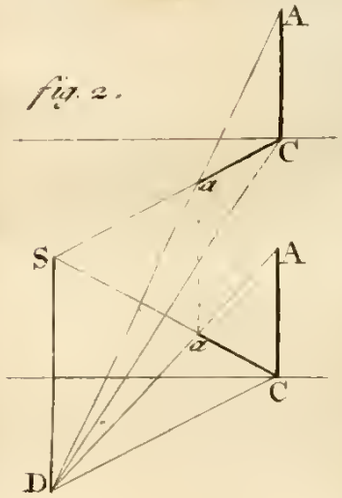

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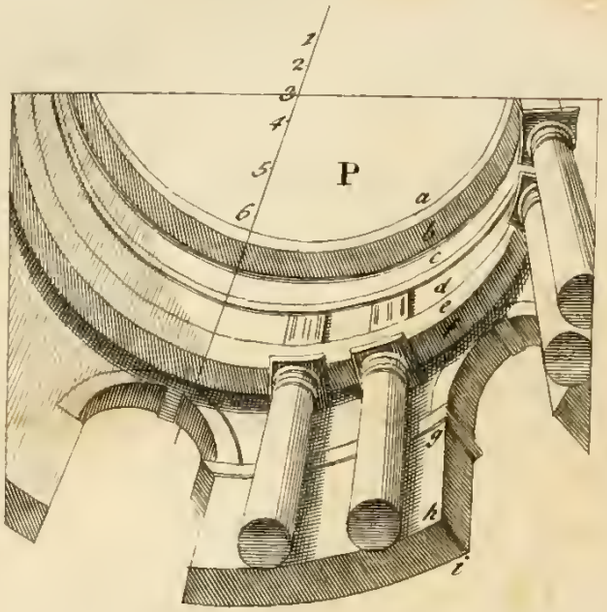

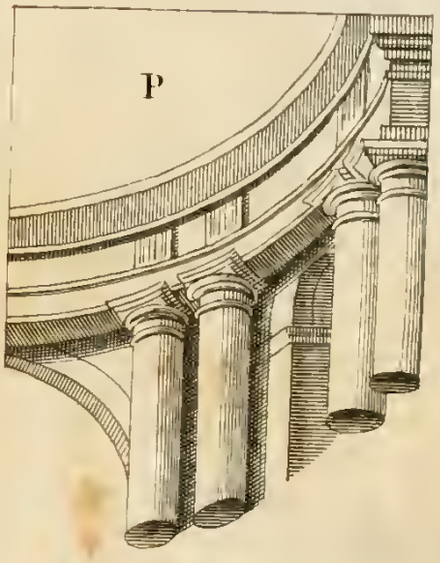

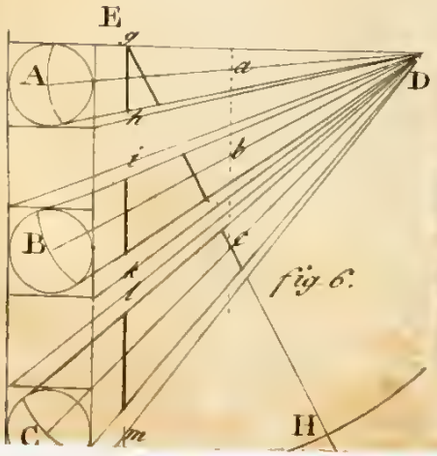

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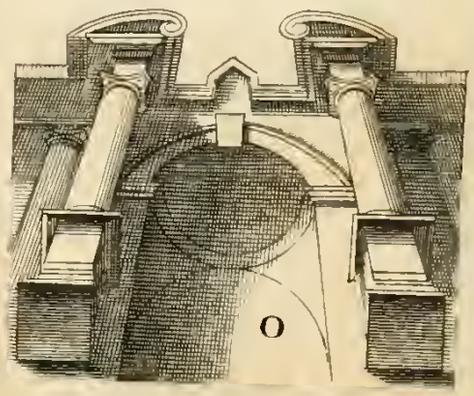

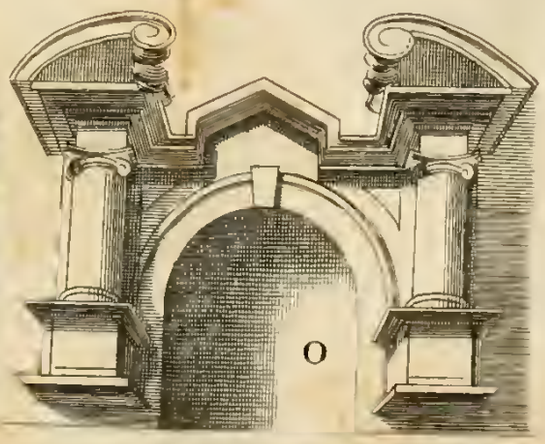

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